

LAKE: GRAND L (EAST) (VLMP SCW)
TOWN: WESTON
COUNTY: AROOSTOOK

MIDAS: 1070
TRUE BASIN: 1
SAMPLE STATION: 3

WHOLE LAKE INFORMATION

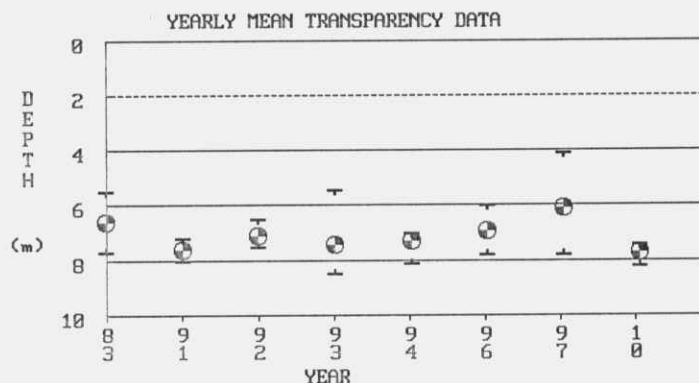
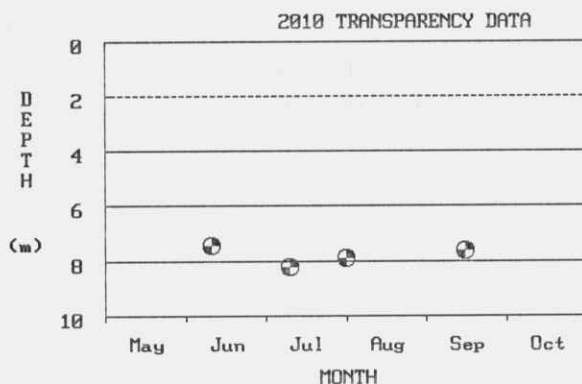
MAX. DEPTH: 39 m. (126 ft.)
MEAN DEPTH: 9 m. (28 ft.)
DELORME ATLAS #: 45
USGS QUAD: DANFORTH
IFW REGION F: Penobscot (Enfield)
IFW FISH. MANAGMENT: Coldwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 6503.0 ha. (16068.7 a.)
FLUSHING RATE: 0.58 flushes/yr.
VOLUME: 616000000.0 cu. m. (499697 ac.-ft.)
DIRECT DRAINAGE AREA: 354.83 sq. km. (137.00 sq. mi.)

PLEASE NOTE THE FOLLOWING: The SAMPLE STATION # refers to the location sampled. The term TRUE BASIN is used to define areas within a lake that are separated by shallow reefs or shoals and therefore function as separate lakes. There are approximately 50 lakes in the state that have more than 1 True Basin. True Basin Characteristics are now being included in the first section of these reports to enable users of the Phosphorous Loading Methodology to better evaluate the data. If there is no data for a particular True Basin, True Basin Characteristics must be obtained from the DEP. GRAND L (EAST) has 1 True Basin(s).

SECCHI DISK TRANSPARENCY GRAPHS:



Note: 2010 graphs may indicate multiple readings taken on a given day.

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

[* indicates that Secchi disk was visible at bottom of lake (or one reading used in calculation was visible)].

YEAR	MEAN	MEAN	MEAN	MEAN	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A(ppb)			TROPHIC STATE INDICES			
	COLOR	pH	ALK	COND.															
	(SPU)		(mg/l)	(uS	EPI	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
				/cm)	CORE	GRAB	GRAB	GRAB											
1983	-	-	-	-	-	-	-	-	5.5	6.6	7.7	1	-	-	-	-	-	-	-
1991	-	-	-	-	-	-	-	-	7.2	7.6	8.0	3	-	-	-	-	-	-	-
1992	-	-	-	-	-	-	-	-	6.5	7.1	7.5	3	-	-	-	-	-	-	-
1993	-	-	-	-	-	-	-	-	5.4	7.4	8.5	4	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-	7.0	7.3	8.1	5	-	-	-	-	-	30	-
1996	-	-	-	-	-	-	-	-	6.0	6.9	7.8	2	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-	4.1	6.1	7.8	3	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	7.4	7.7	8.2	3	-	-	-	-	-	-	-
SUMMARY:	-	-	-	-	-	-	-	-	4.1	7.1	8.5	8	-	-	-	-	-	30	-

WATER QUALITY SUMMARY

EAST GRAND LAKE, Orient

Midas: 1070, Basin: Northern (03)

The Maine Department of Environmental Protection (ME-DEP) and the Volunteer Lake Monitoring Program (VLMP) have collaborated in the collection of lake data to evaluate present water quality, track algae blooms, and determine water quality trends. This dataset does not include bacteria, mercury, or nutrients other than phosphorus.

Water quality monitoring data for this station on East Grand Lake has been collected since 1983. During this period only Secchi Disk Transparencies (SDT) have been obtained. The water quality at this station is considered to be above average. The potential for nuisance algal blooms on East Grand Lake is low.

Water Quality Measures: East Grand Lake is a non-colored lake with an average SDT of 7.0m (23.0ft). Water column TP for other stations on East Grand Lake is below 12 parts per billion (ppb), while Chla is below 2.5 ppb. Recent dissolved oxygen (DO) profiles obtained from the deepest station show low DO depletion in deep areas of the lake. The potential for TP to leave the bottom sediments and become available to algae in the water column (internal loading) is low. Oxygen levels below 5 parts per million stress certain cold water fish, and a persistent loss of oxygen may eliminate or reduce habitat for sensitive cold water species.

See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be found on the Internet at <http://www.lakesofmaine.org/> and/or <http://www.maine.gov/dep/blwq/lake.htm>, or telephone the ME-DEP at 207-287-3901 or the VLMP at 207-783-7733.

Filename: GRA10703, Revised: 2/01, By: lb

LAKE: GRAND L (EAST) (VLMP SCW)
TOWN: WESTON
COUNTY: AROOSTOOK

MIDAS: 1070
TRUE BASIN: 1
SAMPLE STATION: 4

WHOLE LAKE INFORMATION

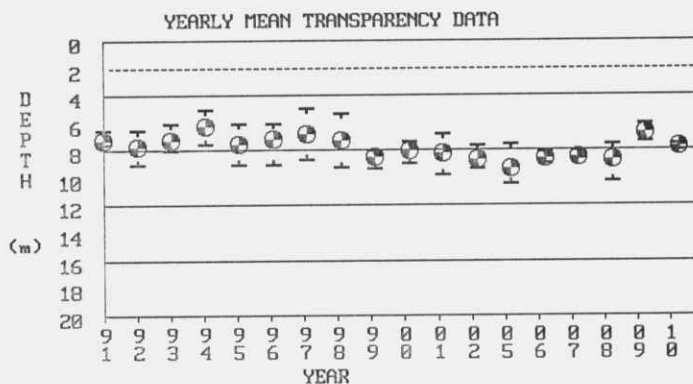
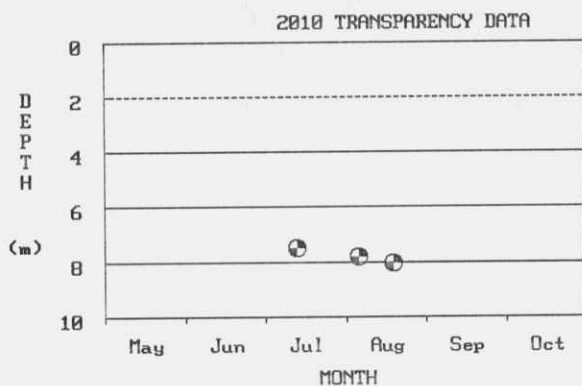
MAX. DEPTH: 39 m. (128 ft.)
MEAN DEPTH: 9 m. (28 ft.)
DELOREME ATLAS #: 45
USGS QUAD: DANFORTH
IFW REGION F: Penobscot (Enfield)
IFW FISH. MANAGMENT: Coldwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 6503.0 ha. (16068.7 a.)
FLUSHING RATE: 0.58 flushes/yr.
VOLUME: 616000000.0 cu. m. (499697 ac.-ft.)
DIRECT DRAINAGE AREA: 354.83 sq. km. (137.00 sq. mi.)

PLEASE NOTE THE FOLLOWING: The SAMPLE STATION # refers to the location sampled. The term TRUE BASIN is used to define areas within a lake that are separated by shallow reefs or shoals and therefore function as separate lakes. There are approximately 50 lakes in the state that have more than 1 True Basin. True Basin Characteristics are now being included in the first section of these reports to enable users of the Phosphorous Loading Methodology to better evaluate the data. If there is no data for a particular True Basin, True Basin Characteristics must be obtained from the DEP. GRAND L (EAST) has 1 True Basin(s).

SECCHI DISK TRANSPARENCY GRAPHS:



Note: 2010 graphs may indicate multiple readings taken on a given day.

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

[* indicates that Secchi disk was visible at bottom of lake (or one reading used in calculation was visible)].

YEAR	MEAN COLOR (SPU)	MEAN pH	MEAN ALK (mg/l)	MEAN COND. (uS/cm)	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A (ppb)			TROPHIC STATE INDICES			
					EPI	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	EPI PHOS		SEC	CHL
					CORE	GRAB	GRAB	GRAB								C	G		
1991					-	-	-	-	6.5	7.2	7.5	3	-	-	-	-	-	-	-
1992					-	-	-	-	6.5	7.7	9.0	4	-	-	-	-	-	-	-
1993					-	-	-	-	6.0	7.2	8.0	5	-	-	-	-	-	30	-
1994					-	-	-	-	5.0	6.2	7.5	6	-	-	-	-	-	37	-
1995					-	-	-	-	6.0	7.5	9.0	5	-	-	-	-	-	29	-
1996					-	-	-	-	6.0	7.1	9.0	6	-	-	-	-	-	31	-
1997					-	-	-	-	4.9	6.8	8.6	6	-	-	-	-	-	33	-
1998					-	-	-	-	5.3	7.2	9.2	6	-	-	-	-	-	30	-
1999					-	-	-	-	8.0	8.4	9.3	5	-	-	-	-	-	24	-
2000					-	-	-	-	7.3	8.0	8.9	4	-	-	-	-	-	-	-
2001					-	-	-	-	6.8	8.2	9.7	5	-	-	-	-	-	25	-
2002					-	-	-	-	7.6	8.6	9.3	3	-	-	-	-	-	-	-
2005	10	7.41	11.1	37	-	5	7	-	7.5	9.3	10.4	3	1.4	1.5	1.6	-	-	-	-
2006	-	-	-	-	-	-	-	-	8.1	8.5	8.9	3	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	8.0	8.4	8.5	4	-	-	-	-	-	-	-

LAKE: GRAND L (EAST) (VLMP SCW)
 TOWN: WESTON
 COUNTY: AROOSTOOK

MIDAS: 1070
 *TRUE BASIN: 1
 *SAMPLE STATION: 4

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

YEAR	MEAN COLOR (SPU)	MEAN pH	MEAN ALK (mg/l)	MEAN COND. (uS /cm)	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A(ppb)			TROPHIC STATE INDICES			
					EPI	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
2008	-	-	-	-	-	-	-	-	7.5	8.6	10.2	3	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	6.0*	6.7*	7.3*	2	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	7.5	7.7	8.0	2	-	-	-	-	-	-	-
SUMMARY:	10	7.41	11.1	37	-	5	7	-	4.9	7.7*	10.4	18	1.4	1.5	1.6	-	-	30	-

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

SAMPLE DATE		
DEPTH	08/28/05	
m	°C	pdm
1.0	21.7	8.1
2.0	21.6	8.1
3.0	21.5	8.1
4.0	21.5	8.1
5.0	21.4	8.1
6.0	21.3	8.1
7.0	20.9	7.8
8.0	20.1	7.7
9.0	17.6	6.2
10.0	15.7	6.1
11.0	14.5	6.2
12.0	13.8	6.0
13.0	13.5	6.0
14.0	13.2	5.8
15.0	12.8	5.8
16.0	12.5	5.4
17.0	12.3	5.0
18.0	12.2	4.8

WATER QUALITY SUMMARY

EAST GRAND LAKE, Forest City Township

Midas: 1070, Basin 1, Sample Station 4 (Near outlet)

The Maine Department of Environmental Protection (ME-DEP) and the Volunteer Lake Monitoring Program (VLMP) have collaborated in the collection of lake data to evaluate present water quality, track algae blooms, and determine water quality trends. This dataset does not include bacteria, mercury, or nutrients other than phosphorus.

Water quality monitoring datasets for this sample station on East Grand Lake have been collected since 1991. During this period, only 1 water chemistry sampling was taken, but lots of Secchi Disk Transparencies (SDT) have been obtained. The water quality at this station is considered to be above average for lakes in Maine. The potential for nuisance algal blooms on East Grand Lake is low.

Water Quality Measures: East Grand Lake is a non-colored lake with an average SDT of 7.6m (25.0ft). Water column TP is 5 parts per billion (ppb), while Chla is 1.5 ppb. Recent dissolved oxygen (DO) profiles obtained from the deepest station show no DO depletion in deep areas of the lake. The potential for TP to leave the bottom sediments and become available to algae in the water column (internal loading) is low. Oxygen levels below 5 parts per million stress certain cold water fish, and a persistent loss of oxygen may eliminate or reduce habitat for sensitive cold water species. Currently, low oxygen levels are not being measured.

See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be found on the Internet at <http://www.lakesofmaine.org/> and/or <http://www.maine.gov/dep/blwq/lake.htm>, or telephone the ME-DEP at 207-287-3901 or the VLMP at 207-783-7733.

Filename: GRA1070_4, Revised: 3/06, By: JP

LAKE: GRAND L (EAST) (VLMP SCW)
TOWN: WESTON
COUNTY: AROOSTOOK

MIDAS: 1070
TRUE BASIN: 1
SAMPLE STATION: 5

WHOLE LAKE INFORMATION

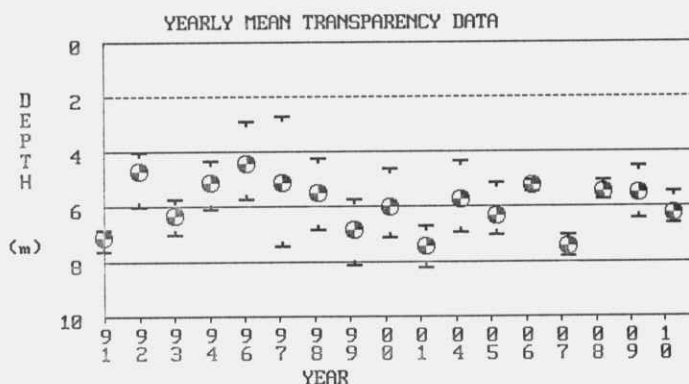
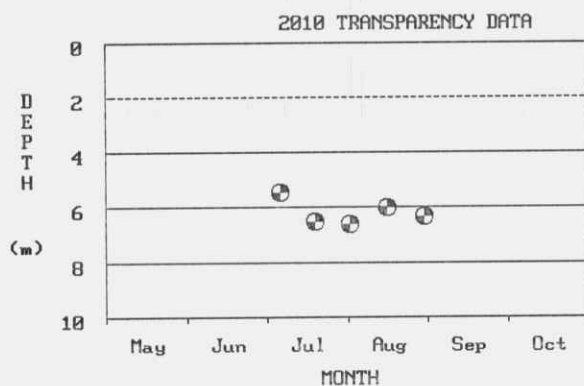
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MEAN DEPTH: 9 m. (28 ft.)
DELORME ATLAS #: 45
USGS QUAD: DANFORTH
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IFW FISH. MANAGMENT: Coldwater

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					EPI	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	EPI PHOS			
																C	G	SEC	CHL
1991	-	-	-	-	-	-	-	-	6.8	7.1	7.6	4	-	-	-	-	-	-	-
1992	-	-	-	-	-	-	-	-	4.0	4.7	6.0	4	-	-	-	-	-	-	-
1993	-	-	-	-	-	-	-	-	5.7	6.3	7.0	2	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-	4.3	5.1	6.1	4	-	-	-	-	-	-	-
1996	26	-	-	-	-	-	-	-	2.9	4.4	5.7	5	-	-	-	-	-	55	-
1997	-	-	-	-	-	-	-	-	2.7	5.1	7.4	5	-	-	-	-	-	47	-
1998	-	-	-	-	-	-	-	-	4.2	5.5	6.8	5	-	-	-	-	-	43	-
1999	-	-	-	-	-	-	-	-	5.7	6.8	8.1	5	-	-	-	-	-	33	-
2000	-	-	-	-	-	-	-	-	4.6	6.0	7.1	3	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	6.7	7.4	8.2	3	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	4.3	5.7	6.9	3	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	5.1	6.3	7.0	4	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	5.0	5.2	5.4	2	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	7.0	7.4	7.8	3	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	5.0	5.4	5.7	4	-	-	-	-	-	-	-

LAKE: GRAND L (EAST) (VLMP SCW)
 TOWN: WESTON
 COUNTY: AROOSTOOK

MIDAS: 1070
 *TRUE BASIN: 1
 *SAMPLE STATION: 5

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

YEAR	MEAN	MEAN	MEAN	MEAN	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A(ppb)			TROPHIC STATE INDICES			
	COLOR (SPU)	pH	ALK (mg/l)	COND. (uS/cm)	EPI	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	EPI	PHOS	SEC	CHL
2009	-	-	-	-	-	-	-	-	4.5	5.5	6.4	4	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	5.4	6.2	6.6	2	-	-	-	-	-	-	-
SUMMARY:	26	-	-	-	-	-	-	-	2.7	5.9	8.2	17	-	-	-	-	-	45	-

WATER QUALITY SUMMARY

EAST GRAND LAKE, Weston

Midas: 1070, Basin 1, Sampling Station 5

The Maine Department of Environmental Protection (ME-DEP) and the Volunteer Lake Monitoring Program (VLMP) have collaborated in the collection of lake data to evaluate present water quality, track algae blooms, and determine water quality trends. This dataset does not include bacteria, mercury, or nutrients other than phosphorus.

Water quality monitoring datasets for this station on East Grand Lake have been collected since 1991. During this period only Secchi Disk Transparencies (SDT) have been obtained. The water quality at this station is considered to be slightly above average. The potential for nuisance algal blooms on East Grand Lake is low.

Water Quality Measures: East Grand Lake is a non-colored lake (water color = 26 color units), with this station having an average SDT of 5.9m (19.4ft). Water column TP for other stations on East Grand Lake is below 12 parts per billion (ppb), while Chla is below 2.5 ppb. Recent dissolved oxygen (DO) profiles obtained from the deepest station show no DO depletion in deep areas of the lake. The potential for TP to leave the bottom sediments and become available to algae in the water column (internal loading) considered is low. Oxygen levels below 5 parts per million stress certain cold water fish, and a persistent loss of oxygen may eliminate or reduce habitat for sensitive cold water species.

See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be found on the Internet at <http://www.lakesofmaine.org/> and/or <http://www.maine.gov/dep/blwq/lake.htm>, or telephone the ME-DEP at 207-287-3901 or the VLMP at 207-783-7733.

Filename: GRA1070_5, Revised: 3/06, By: JP